ROBOMOP

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Abstract— **The ROBOMOP is based on the principle of Arduino uno. This work on robomop is done keeping in mind all the future applications and possibilities which may be helpful since all the applications are taking a step forward towards automatic machining.**

Index Terms—[Font: Times New Roman, Size:9]About four(minimum) key words or phrases in alphabetical order, separated by commas.

1. Introduction

A robomop is a robotic device which is designed for automatic cleaning of our floors. A hassle-free cleaning option, robomop uses dry or damp cloths to mop hard-surface floors for you, keeping dust, daily dirt and smudges under control automatically.

Robomop is easy to use from beginning to end. With a host of convenient features, this device does the tedious work of scrubbing hard floors so you don't have to, eliminating the hassle of a traditional mop and bucket.

We have used 1 servo and 2 DC motors. The supply is taken from the 9 Volt battery connected to it. Also, the Arduino uno is connected to the DC motor and is programmed according to its application. The servo motor is connected another power supply which on the other end is used to move the gears and further its tyres. A mop is connected to the arms of the robot which cleans the floor as it has been programmed to which hangs up itself in air to dry itself when it gets wet.

2. Construction

A welded iron plate is used as a base of this device. Here we have connected tyres to this base to give it a car like structure. Also a couple of gears have been used to move the tyres which is connected to a servo motor which is given an individual supply.

The automation of this device is designed through an Arduino uno which is programmed to move the arms of the device vertically at an angle of 90°. Its vertical movement is programmed so as to dry the mop when it gets wet while cleaning. A DC motor is connected to the Arduino board which controls the movement of the mop. Also a relay is connected to it with a power source and IR sensors which is programmed in accordance with the Arduino uno.

3. Working

The robomop is an extremely easy device to operate and work with. With loaded features and a simple interface gives an addition to the list of benefits of this device. You won't be needing a bucket and a mop for cleaning purpose anymore. Its working has been made simple and easy to understand.

The main section is that of the Arduino uno where the programming is initiated which is connected to a relay and hence a power source and this on the other end is connected to a DC motor which moves the mop as it has been programmed forward and vertical for drying itself.

The servo motor is connected to the device to move it in forward direction while it scrubs the floor on its way.

4. Applications

The main application of this device is automatic cleaning. This device has been designed keeping in mind our future needs. Since everything today is heading towards the world of automatic machining, this device will take us closer to the world of

automation. The robomop becomes much more useful at places where constant cleanliness has to be maintained, such as the hospitals, airports etc. this may ensure 24 hours cleaning which can save a lot of human effort. Moreover, it can reach those corners of our house where it's difficult for a human hand to reach, like under the bed, couch or the table, or maybe behind an Almira. So it becomes more vulnerable and useful when it comes to cleaning in tricky areas. Ensuring 24*7 cleaning, it will surely be keeping a lot of diseases away from us, especially those transmitted through unhygienic atmosphere. So, indirectly, it keeps you healthy and gives you a clean environment.

There are so many out in the world, who are infected of skin and can't use disinfectants. This device is beneficial for such people. Also, students who live alone, old people who find it difficult to clean their houses can use this robomop which can work wonders for them.

5. Conclusion

From the above description, we can conclude that this robomop is an extremely useful device. Cleaning your home was never such fun. This will be more useful in our future.
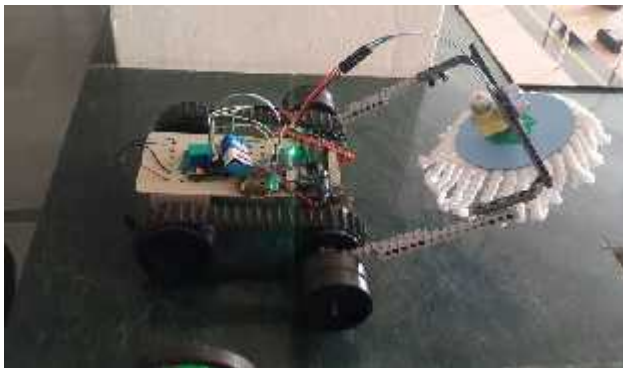
(a) robomop

6. References

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